



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/614,277

07/08/2003

Haruyoshi Ono

030824

7735

38834

7590

09/22/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

VAN ROY, TOD THOMAS

ART UNIT

PAPER NUMBER

2828

NOTIFICATION DATE

DELIVERY MODE

09/22/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No. 10/614,277	Applicant(s) ONO ET AL.	
	Examiner TOD T. VAN ROY	Art Unit 2828	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 1-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The examiner acknowledges the amending of claim 9.

Response to Arguments

Applicant's arguments filed 05/26/2009 have been fully considered but they are not persuasive.

The Applicant has argued that it is unobvious to change a setting value of a point to a segment or a range.

The Examiner notes that this argument is moot as the rejection of claim 1 outlined the obviousness of changing from a P_cent value to another value, which may be higher or lower than P_cent. Note the use of the term value to denote a single point, not a range or segment.

The Applicant has outlined points A and B (Remarks, pgs.19-21), which state that the AAPA does not teach the calculation of 4 ranges (optimum power intensity, power intensity variable, optimum temperature setting, and temperature variable), but only teaches the calculation of 2 ranges (shown in figs.3a/b).

The Examiner notes that the rejection of claim 1 outlined the interpretation that the optimum power range equals the power intensity variable range, while the optimum temperature range equals the temperature variable range. This interpretation was made based on the fact that the claim language details the optimum power/temperature ranges fall within the power/temperature variable ranges. Therefor the calculation of the

power/temperature variable ranges includes the calculation of the power/temperature optimum ranges. (*see note below*)

The Applicant has argues point C, wherein the setting value generating unit does not calculate the optimum power/temperature ranges.

With reference to the response to points A/B above, the Examiner has outlined that the ranges are calculated concurrently as they are interpreted to be equal. This process is handled via the setting value generating unit.

The Examiner further notes the range titles (optimum power/temp, variable power/temp) are being interpreted simply as labels. If one has a range labeled A calculated to consist of values 1-10, then one could label any number of other ranges which fall within the 1-10 values. These additional ranges can then be considered to be calculated at the same time as range A (ex: range B: 2-4, range C: 4-8...etc.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

Art Unit: 2828

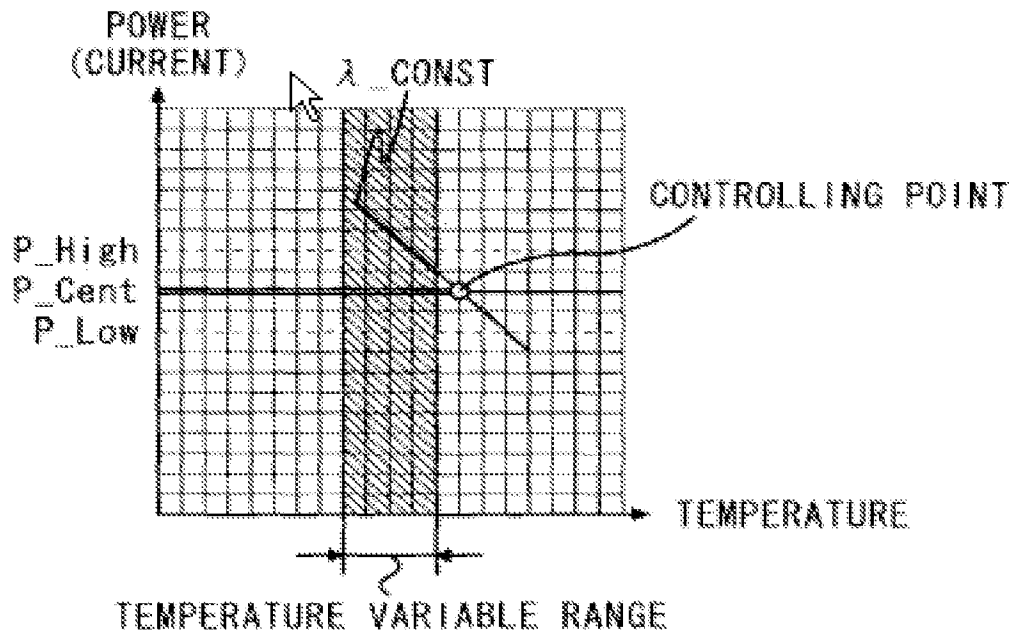
1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 9-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's disclosed prior art (hereafter 'prior art').

With respect to claims 9 and 19, the prior art teaches a setting value generating device that generates such a setting value that causes laser light emitted from a laser module to have a predetermined wavelength (λ target, spec. pg.4 line 17) by wavelength tuning using a wavelength locker module in a measurement system (spec. pgs.1-2 lines 36-2) and satisfies predetermined temperature conditions and predetermined power intensity conditions (fig.3a, defined temp / power ranges), the setting value generating device comprising: an optimum power intensity calculating unit (fig.1 #120) that calculates an optimum power intensity setting range (fig.3a) that maintains the predetermined wavelength falls within a predetermined power intensity variable range (range can be considered equal to the intensity setting range, fig.3a) a predetermined power intensity variable range (maintained via APC feedback); an optimum temperature calculating unit (fig.1 #120) that calculates an optimum temperature setting range (fig.3a, pgs.4-5 lines 37-9) that maintains the predetermined wavelength and falls within a predetermined temperature variable range; and a setting value generating unit (fig.1 #120) that generates the setting value based on the optimum power intensity setting range (optimum is P_{cent}) calculated by the optimum power intensity calculating unit and the optimum temperature setting range calculated

Art Unit: 2828

by the optimum temperature calculating unit (setting values generated based on temp/wavelength/power, pg.6 lines 17-21), wherein the laser module can be operated with the setting value that is located within the predetermined temperature setting range and the predetermined power intensity setting range even when the laser module *operates outside of* the predetermined temperature variable range at center value of the predetermined power intensity variable range while the laser light is kept at the predetermined wavelength (As described at pgs.3-7 of the disclosure and figs.2/3b, the AAPA is shown to follow the steps of setting initial values S11 and later continuing to test the actual wavelength S22, as the device operates with given setting values in place it is possible that step S22 takes place upon drifting over time to a controlling point outside of the temperature variable range but still at P_cent and on the predetermined wavelength shown in fig.3b, at this point the S22 step can be preformed, obtaining zero error, and allowing the device, however briefly, to continue to operate with the given initial setting values while the temperature is outside of the temperature variable range).



The prior art does not teach the setting value to have a power different from a center value of the predetermined intensity variable range (prior art sets the value at P_cent, fig.2 S13). It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the automatic power control (APC) setting value to be a value other than the central power value as a matter of engineering design choice, which would allow for values of increased, or decreased, power to be used during varied operating conditions.

With respect to claims 10 and 20, the prior art teaches a relational expression defining unit (fig.1 #120) that defines a relational expression between a temperature and a power intensity that causes the laser module to maintain the predetermined wavelength (T_cal defined on pg.4, relating temperature, wavelength, and inherently relating the power intensity as the power intensity applied to the device influences both the temperature of the device itself, as well as the wavelength the device is outputting

under the current conditions); a power intensity upper and lower limit defining unit (fig.1 #120, shown defined in fig.3a) that defines an upper limit value and a lower limit value of a power intensity that satisfies the relational expression and also satisfies the predetermined temperature range and the predetermined power intensity range (P_{High} , P_{Low}); wherein the optimum power intensity calculating unit calculates the optimum power intensity that is the middle value between the upper limit value and the lower limit value of the power intensity defined by the power intensity upper and lower limit defining unit (see claim 1); and the optimum temperature calculating unit substitutes the optimum power intensity calculated by the optimum power intensity calculating unit in the relational expression defined by the relational expression defining unit (see claim 1, also, the P_{cent} value is set prior to the temp feedback loop, so the value would be used in the calculation as described in the rejection to claim 1, fig.2 S14).

With respect to claims 11 and 21, the prior art teaches the laser module can vary wavelengths (inherent, set target wavelength would not be necessary if only 1 wavelength were possible), and the setting value is generated in relation with each of the wavelengths (setting value generated with chosen target wavelength).

Claims 12 and 22 are rejected for the reasons outline in the rejections to claims 10 and 11. The prior art has taught the presence of multiple wavelengths being present in the transmitting device, each being stabilized when appropriately selected. It is inherent that there would be a shortest wavelength and a longest wavelength available,

and that the relational expression unit, and power and temperature calculating unit (fig.1 #120) would control the shortest and longest wavelength conditions respectively.

With respect to claims 13 and 23, the prior art teaches a setting value storage unit that stores the setting value generated by the setting value generating unit, wherein the laser module contains unique identification information, and the setting value storage unit relates the setting value to the unique identification information and stores the setting value (pg.6 lines 17-24).

Claims 14-18 are rejected for the same reasons given in the rejection to claims 9-13, as they are the methods for calculating the setting value that has been taught in the prior art.

Claim 24 is rejected for the same reasons given for the rejection to claims 9 and 19 above, as it is inherent that a recording medium of some type must be present for the computer functioning as the calculating unit to run the given program since the program itself must have been recorded to be read by the computer.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2828

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOD T. VAN ROY whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/TVR/

/Minsun Harvey/
Supervisory Patent Examiner, Art Unit 2828